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EXAMINER

GORMAN, DARREN W

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/658,151	Applicant(s) WARD ET AL.	
	Examiner Darren W. Gorman	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) 40,41,45 and 56-65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19,21-39,42-44 and 46-55 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/19/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species Group I in the reply filed on March 13, 2006 is acknowledged. The traversal is on the ground(s) that the species defined by the Examiner do not substantially differ in field or classification so as to constitute an undue burden for the Examiner to search and examine all of the pending claims. This is not found persuasive because in order to give full consideration of all the limitations of the recognized divergent subject matter between the identified distinct species, the Examiner would be required to perform an unduly burdensome search. Furthermore, Applicant has not submitted evidence or identified such evidence now of record showing the identified species to be obvious variants or clearly admitted on the record that this is the case.

The requirement is still deemed proper and is therefore made FINAL.

2. Although Applicant indicated that claims 1-57 read on the elected species Group I, as shown in Figures 1-22, the Examiner has determined that only claims 1-39, 42-44 and 46-55 read on the elected species. The recited elements of claims 40, 41, 56 and 57 appear only in species Group II, as shown in Figure 23, and the recited elements of claim 45 appear only in species Group III, as shown in Figure 24.

3. Claims 40, 41, 45 and 56-65 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on March 13, 2006.

Information Disclosure Statement

4. The IDS filed on July 19, 2004 is hereby acknowledged and has been placed of record. Please find attached a signed and initialed copy of the PTO 1449.

Minor Claim Suggestions By Examiner

5. The following change(s) are recommended to improve clarity of the claims. The claims have been examined on the merits including the suggested changes below.

In claim 3, --the-- should be inserted between “wherein” and “body”

In claim 27, on line 2, “gate” should be replaced with --grate--

In claim 27, on line 3, “gate” should be replaced with --grate--

In claim 34, on line 7, “vehicle;” should be replaced with --vehicle.--

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

7. Claims 29, 30, 38, 39, 42-44 and 46-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 29, the recitations, “the dispensing rate of the material, direction of the material, velocity of the material, and the spread of the material” are unclear. Claim 28 only includes liquid storage and liquid dispensing, so it is unclear what “the material” is referring to, since “the material” is clearly not the same as “the liquid” recited in claim 29.

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Regarding claim 30, the recitation, “the endless conveyor” lacks clear antecedent basis. No conveyor has been recited, nor has an “endless” conveyor been recited. Further, an “endless conveyor” is unclear with respect to the elected embodiment, which includes a pair of augers. Augers are not recognized in the art as “endless conveyors”. Still further, the recitation, “a pre-wetting system for selectively dispensing liquid onto material being transported by the endless conveyor out of the vehicle” is unclear. Claim 28 only includes liquid storage and liquid dispensing, so it is unclear what “material” is being “pre-wetted”.

Regarding claim 38, on lines 13-14, the recitation, “the endless conveyor” lacks clear antecedent basis, since only “a conveyor assembly” has been recited in the claim. Further, limiting the “conveyor” to an “endless conveyor” is unclear with respect to the elected embodiment, which includes a pair of augers. Augers are not recognized in the art as “endless conveyors”.

Regarding claim 43, the recitation, “a spreader disc” appears to be a double inclusion, since “a spreader disc” was recited in claim 42, and the Examiner is unaware of more than one spreader disc in Applicant’s disclosed invention.

Regarding claim 51, the recitations, “the manifold” and “the lines” lack clear antecedent basis.

The above claims will be examined as best understood by the Examiner.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 4-6, 8, 9, 13-16, 21-24, 28-33, 38, 39, 42-44 and 46-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Doherty et al., USPN 6,173,904.

Regarding claim 1, Doherty shows a vehicle (40) (see Figures 1 and 2) comprising: a chassis (no reference number); and a storage and dispensing apparatus (42) disposed upon the chassis, comprising: a hopper (48) for storing granular material (44); a conveyor assembly (50) for selectively transporting the material from the hopper, at least a portion of the conveyor assembly being disposed within the hopper; a liquid storage system (54) for storing liquid; and a liquid dispensing system (56) for selectively dispensing the liquid from the liquid storage system.

As to claims 2 and 4, Doherty further shows a body (no reference number) mounted to the chassis, the body having front and rear ends and first and second side walls, the body being disposed between the chassis and the storage and dispensing apparatus, the storage and dispensing apparatus being disposed within the first and second side walls of the body (see Figures 1 and 2).

As to claim 5, Doherty shows a portion of the rear end of the storage and dispensing apparatus extending beyond the rear end of the body (see Figure 1).

As to claims 6, 8 and 9, Doherty shows and discloses the liquid storage system defining a liquid containment vessel (54), which “may essentially be bifurcated and positioned along the length of the vehicle on the outer sides of the granular hopper” (see column 4, lines 59-62). It should be noted that, although Figure 2 of Doherty does not clearly show each of the structural limitations recited in claims 6, 8 and 9, the arrangement of the liquid vessel as described in column 4, lines 59-62 of Doherty would inherently meet all of these limitations.

As to claims 13-16, 21 and 22, Doherty shows the liquid dispensing system having a pre-wetting system (no reference number, second spray bar shown in Figure 2; see column 3, lines 5-8), and an anti-icing system (56), wherein each system includes a plurality of nozzles (see Figure 2). Further, Doherty shows the hopper including a discharge chute (52), wherein the pre-wetting system includes nozzles disposed in the discharge chute (see again Figure 2; and column 3, lines 5-8). It should be noted that, although Figure 2 of Doherty does not clearly show that the pre-wetting nozzles are in fact within the discharge chute, Doherty’s disclosure that the granular material is pre-wetted “prior to the granular material being dispensed”, in combination with what is shown in the view of Figure 2, inherently disposes the pre-wetting nozzles in the discharge chute.

As to claim 23, although Doherty does not expressly disclose a “plumbing cabinet” housing at least a portion of the liquid dispensing system, such is inherent within the vehicle of Doherty because the liquid dispensing system of Doherty inherently includes a piping system, valves, pumps, etc., and inherently at least one of these elements, if not all of these elements of the liquid dispensing system is housed within an enclosure of some sort, thereby anticipating the claim.

As to claim 24, Doherty discloses that the spray bar position/orientation may be controlled locally or remotely (see column 5, lines 6-8). Doherty also discloses that a series of valves such as solenoid valves may be remotely operated, and that the width of the spray from each nozzle can be controlled by either the operator or by automated control (see column 5, lines 33-38).

As to claims 28-32, Doherty further discloses the vehicle comprising a control system (including on board computer 216), which monitors several parameters and controls the liquid dispensing system depending on the condition of the parameters (see column 16, lines 10-45). Doherty further expressly teaches placing a variety of sensors on the vehicle “in order to tailor application of materials more exactly to local conditions and requirements” (see column 16, lines 46-56).

As to claim 33, since Doherty expressly discloses that the spray bar (56) includes a plurality of nozzles (64), and that the spray bar position/orientation may be locally or remotely variable (see column 5, lines 6-8), then inherently the plurality of nozzles are movable, and the control system monitors the position of the nozzles and controls the movement thereof.

As to claims 38 and 39, Doherty shows the conveyor assembly comprising an auger (50).

As to claims 42-44, Doherty further shows a spinning spreader disk (46) receiving and spreading the granular material. Further, Doherty expressly discloses that the spreading of the granular materials may be adjusted “as is well known” to adjust the spread pattern and flow of the material (see column 11, lines 50-57).

As to claims 46-55, since Doherty expressly discloses a spray bar with nozzles (no reference number) for pre-wetting the granular material prior to being dispensed, and Doherty

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expressly discloses another spray bar (56) with nozzles (64) which sprays liquid for the anti-icing system directly onto the roadway (see column 5, lines 25-26), then inherently the vehicle of Doherty includes a manifold and a plurality of lines downstream of the liquid vessel which permit selective or simultaneous fluid communication between the liquid vessel and the spray bars. It should also be noted that Doherty also discloses that the spray bar may optionally be formed as a “vertical stack of smaller spray bars” (see column 5, lines 1-3). Such an arrangement would also inherently require a manifold and a plurality of lines fluidly connected thereto.

10. Claims 34 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Kime, USPN 6,068,200.

Kime shows a vehicle (10) (see Figures 1-5) comprising: a chassis (16); a body mounted to the chassis, the body comprising a V-box spreader (see column 8, lines 25-31) and having front and rear ends and first and second side walls; and a conveyor assembly comprising at least two augers (148, 150) disposed in substantially parallel spaced relationship to each other between the side walls (see Figure 5).

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

12. Claims 34 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Kime, USPN 6,446,879.

Kime shows a vehicle (10) (see Figures 4-6) comprising: a chassis (16); a body mounted to the chassis, the body having front and rear ends and first and second side walls; and a conveyor assembly comprising at least two augers (76, 78) disposed in substantially parallel spaced relationship to each other between the side walls, and the conveyor assembly including a pair of motors (82, 86) to operate the augers, each auger including a first end, a second end, and a shaft (80, 84), the first end of each auger being supported adjacent the front end of the body by a bearing, and the second end of each auger being supported by the motors, respectively (see column 6, line 62 through column 7, line 6).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904.

Doherty shows all of the recited elements of claim 16, however Doherty does not expressly disclose the anti-icing system including a pair of nozzle assemblies. Doherty does expressly disclose that spray bar (56) of the anti-icing system “may also be formed by a vertical stack of smaller spray bars and nozzles” (see column 5, lines 1-3). In such an arrangement as disclosed by Doherty, the “vertical stack of smaller spray bars” would reasonably read on a single nozzle assembly having at least an upper pair of nozzles, lower pair of nozzles, and intermediate pair of nozzles, the nozzle assembly depending from the storage and dispensing apparatus.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate the nozzle assembly disclosed by Doherty, such that a pair of nozzle assemblies depend from the storage and dispensing apparatus of Doherty, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

15. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kime, USPN 6,068,200, or Kime, USPN 6,446,879.

Both Kime, ‘200 and Kime, ‘879, show all of the recited elements of claim 34, however neither reference expressly discloses a “sealed lubrication system for the augers”.

It is old and well known in the art to include a lubrication system for continuously moving parts, such as auger conveyors, in order to reduce friction and wear of the moving parts,

which can lead to damage and/or breakdown. It is also well known to make such a lubrication system “sealed” in order to prevent lubrication fluid from escaping and mixing with the road treatment material being conveyed by the augers.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a sealed lubrication system, as is old and well known in the art, with the auger conveyors shown by Kime, ‘200 or Kime, ‘879, in order to reduce friction and wear of the moving parts, and in order to prevent lubrication fluid from escaping and mixing with the road treatment material being conveyed by the augers.

16. Claims 3, 7 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Kime, USPN 6,446,879.

Doherty shows all of the recited elements of claims 1 and 2, however, Doherty does not expressly teach the body being pivotally mounted to the chassis, nor does Doherty expressly teach the conveyor assembly comprising a pair of augers. Further, Doherty does not expressly teach the storage and dispensing apparatus including a clean-out passage connected to the liquid dispensing system.

Kime shows a road treatment vehicle (10) (see Figures 1-6), comprising a body pivotally mounted to the vehicle chassis (see Figure 2), the body including a hopper (270) for storing solid granular material and at least one liquid storage tank (308, 310), and a conveyor assembly disposed within the hopper comprising a pair of augers (76, 78) in substantially parallel, spaced relationship to each other. Further, Kime shows a plurality of clean-out passages (322-328) connected to the at least one liquid storage tank (see column 11, lines 24-26).

As to claim 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have pivotally mounted the body of Doherty, as taught by Kime, in order to further facilitate conveying of the granular material within the hopper body by using gravity.

As to claim 7, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conveyor assembly of Doherty to include a pair of augers in parallel spaced arrangement, as taught by Kime, in order to provide a more reliable material conveying system that is capable of conveying a larger quantity of material.

As to claim 25, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include at least one clean-out passage, as taught by Kime, connected to the liquid storage tank of Doherty, in order to facilitate cleaning out and draining of the liquid storage tank.

17. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Kime, USPN 6,068,200.

Doherty shows all of the recited elements of claim 9, however Doherty is silent as to including a plurality of “braces” having a plurality of holes disposed within the liquid containment vessel

Kime shows a vehicle having a liquid storage tank (370) (see Figure 4) including a plurality of baffle-type braces (386-388, 390, 422-425), each brace having a plurality of holes (see Figure 5A; and column 12, lines 52-58), wherein the braces improve structural integrity for

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the tank, while preventing the “slosh phenomena”, which may occur with sudden stops of the vehicle (see Figure 4; and column 14, lines 2-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include perforated baffle-type braces, as taught by Kime, in the liquid storage tank of Doherty, such that the tank has improved structural integrity and such that the “slosh phenomena” is prevented during sudden stops of the vehicle.

18. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Wise et al., USPN 5,186,396.

Doherty shows all of the recited elements of claim 1, however Doherty is silent as to including a liquid agitation system.

Wise shows a road treatment vehicle (10) (see Figures 1 and 5), which dispenses granular and liquid material, including a liquid storage system having a flow control valve (42), which either permits liquid flow to a series of nozzles (21) or recirculates the liquid back to a liquid storage tank (16). It is well known in the art that recirculating liquids within a liquid storage and dispensing system inherently agitates and mixes liquid.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid storage and dispensing system of Doherty, to recirculate the stored liquid, as taught by Wise, in order to agitate the liquid such that suspended particles within the liquid are kept uniformly mixed within the solution.

19. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Kubacak et al., USPN 4,315,602.

Doherty shows, or renders obvious, all of the recited elements of claim 18, however, Doherty does not expressly teach each nozzle being rotatable.

Kubacak shows spray bar assembly for a vehicle including nozzle pairs, each nozzle (52) being mounted on a swivel (54) such that the nozzles may be adjusted depending on the desired spray pattern (see Figure 2; and column 4, lines 26-32).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the nozzles of Doherty to be rotatable, as taught by Kubacak, such that the nozzles can be adjusted depending on the desired spray pattern.

20. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Ungerer et al., USPN 6,123,276.

Doherty shows all of the recited elements of claim 1, however Doherty does not expressly teach the hopper including a plurality of grate screens covering the hopper opening, nor does Doherty teach an “interlock system” associated with the grate screens.

Ungerer shows a vehicle having a granular material hopper, wherein the hopper opening is covered by a plurality of grate screens which permit loading of granular material through the screens while preventing personnel from entering the hopper, the grate screens including an interlock system which selectively prevents the grate screens from being opened and reduces the possibility of inadvertent activation of an auger within the hopper while the grate screens are open (see Figures 1-6; and column 1, line 23 through column 2, line 44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include grate screens and an interlock system, as taught by Ungerer, with the vehicle shown by Doherty, in order to permit loading of granular material while preventing personnel from entering the hopper and to selectively prevent the grate screens from being opened in order to improve safety of personnel using the vehicle.

Allowable Subject Matter

21. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents to Middlesworth, Leigh et al., Kupper, Kime et al., vanVooren, Weeks, Doherty et al., Alsip et al., Kime, and Manon et al., are cited as of interest.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W. Gorman whose telephone number is 571-272-4901. The examiner can normally be reached on M-F 7:30-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DWG 4/3/06
DWG
April 3, 2006

Darren W Gorman
Examiner
Art Unit 3752


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